

TWO-SPEED TORQUE-SPLITTING INTERAXLE TRANSFER CASE

Abstract

An interaxle transfer case distributes drive power from an input drive shaft to both a rear propshaft aligned with the input drive shaft and to a front propshaft that is offset from both the input drive shaft and the rear propshaft. Within the transfer case, a planetary gear unit provides for delivering drive power from the input drive shaft to the front and rear propshafts at different speed ratios. A single-pinion differential gear unit within the transfer case provides for unequally dividing drive torque between the front and rear propshafts. Planet gears of the planetary gear unit and pinion gears from the single-pinion differential gear unit are mounted for rotation within a common carrier. The common carrier has one or more extended portions for supporting ends of a transfer case housing.